Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1-20 *(cancelled)*

21. *(currently amended)* A system for producing a pulse code modulation (PCM) signal, comprising:

a first filter configured to produce an input signal I(n) from a secondary audio program (SAP) signal;

a frequency modulator (FM) including,

a second filter that generates a quadrature-phase signal Q(n) from the input signal I(n),

a FM device configured to generate a frequency modulated signal FM(n) from the input signal I(n) and the quadrature-phase signal Q(n), and

a third filter configured to produce the pulse code modulation (PCM) signal from the FM(n) signal.

22. *(original)* The system of claim 21, wherein the FM(n) signal equals $[I(n)Q'(n)-I'(n)Q(n)] / [I^2(n)+Q^2(n)]$.

23. *(original)* The system of claim 21, wherein the SAP signal is a constant magnitude signal, a sine wave, or a cosine wave.

24. *(original)* The system of claim 21, wherein the first filter is a band pass filter.

25. *(original)* The system of claim 21, wherein the second filter is a Hilbert filter.

26-31 (cancelled)